Measuring confidence levels in the predictions of credit risk models.

Credit scoring regression models are routinely used in binary decisions where a cut-off score indicates a pass/fail threshold. Increasingly, the predicted values from these models are used to drive other decisions and calculations including loan pricing, product downsell strategies, behavioural marketing strategies, collection activity and not least, predicted losses in Basel type calculations. In most implementations, little regard is given to the error level of the underlying score and hence calculations and business decisions in which the score is used. This is especially prevalent in respect to the change of error level at different points across the score distribution.

We propose a technique to derive optimal score bands to minimise the experimental and theoretical variation in predictions. We will show how to measure prediction confidence levels and observe their variation across the full range of scores using non-parametric techniques and we will demonstrate the advantage of these techniques over Standard Error calculations.

Authors: Mark Stirling, Paul Robinson